



**Application for the Approval of an Incremental
Capacity Project according to Article 28 (1)
NC CAM for the Border between Poland and
the Czech Republic**

2020-10-30



The application for an incremental capacity project for the market border between Poland and the Czech Republic has to be approved by the respective national regulatory authorities (NRAs). This document presents a common project proposal for the interconnection point Cieszyn/Český Těšín as agreed by:



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According to Article 28 (1) NC CAM, Operator Gazociągów Przesyłowych GAZ-SYSTEM S.A. (hereinafter referred to as: GAZ-SYSTEM) submits this proposal for approval through the President of the Energy Regulatory Office (URE) and NET4GAS, s.r.o. (hereinafter referred to as: NET4GAS) submits this proposal for approval through the Energy Regulatory Office (ERÚ) for an incremental capacity project for the market border between Poland and the Czech Republic. The interconnection point at Cieszyn/Český Těšín (hereinafter referred to as: IP Cieszyn/Český Těšín, IP Cieszyn or IP Český Těšín) connects the abovementioned adjacent gas transmission systems.



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1. Introduction to the application of the project proposal for incremental capacity

Transmission system operators GAZ-SYSTEM and NET4GAS have received non-binding demand indications for firm capacity in the direction from Poland to the Czech Republic at the interconnection point between the entry-exit system of GAZ-SYSTEM and the entry-exit system of NET4GAS.

The Market Demand Assessment Report (MDAR) assessed the non-binding demand indications received in the demand assessment phase from 1 July 2019 to 26 August 2019.

The following aggregated non-binding demand indication **received by GAZ-SYSTEM** for firm capacity has been used as the basis for the demand assessment:

<i>From</i>	<i>To</i>	<i>Gas year</i>	<i>Amount (kWh/h)/y</i>	<i>Request was submitted to other TSOs</i>	<i>Additional Information (e.g. type of capacity)</i>
<i>EXIT-CAPACITY</i>	<i>ENTRY-CAPACITY</i>				
<i>Poland</i>	<i>Czech Republic</i>	<i>2021/22 – 2035/36</i>	<i>1,267,920</i>	<i>Up to 1,167,920 - Yes, to NET4GAS, Above 1,167,920 – No</i>	<i>No</i>

The following aggregated non-binding demand indication **received by NET4GAS** for firm capacity has been used as the basis for the demand assessment:

<i>From</i>	<i>To</i>	<i>Gas year</i>	<i>Amount (kWh/h)/y</i>	<i>Request was submitted to other TSOs</i>	<i>Additional Information (e.g. type of capacity)</i>
<i>EXIT-CAPACITY</i>	<i>ENTRY-CAPACITY</i>				
<i>Poland</i>	<i>Czech Republic</i>	<i>2021/22 – 2035/36</i>	<i>1,167,920</i>	<i>YES, to GAZ-SYSTEM</i>	<i>No</i>

The indications submitted for each TSO were not the same. The difference occurred due to the fact that GAZ-SYSTEM received an additional demand indication for 100,000 kWh/h/y in the direction from Poland to the Czech Republic for the gas years from 2020/2021 to 2034/2035.

Based on the outcome of the MDAR published on both TSOs' websites on 21 October 2019, the TSOs concerned developed technical studies according to Article 27 NC CAM. To align the level of requested incremental capacity, the TSOs decided to consider for further technical analysis the demand for incremental capacity at the level of 1,270,000 kWh/h/y.

Currently, there is no existing technical capacity between the entry-exit system of Poland and the Czech Republic in the requested direction. The existing interconnection point between Poland and the Czech

Republic at IP Cieszyn/Český Těšín enables firm gas transmission only in one direction, from the Czech to the Polish transmission system, with a capacity of approx. 0.5 bcm annually.

As a result of the technical studies, to meet the requested demand for incremental capacity from Poland towards the Czech Republic, GAZ-SYSTEM and NET4GAS propose implementing an incremental capacity project at the existing IP Cieszyn/Český Těšín.

Moreover, at present, GAZ-SYSTEM and NET4GAS, based on the decisions of their respective competent national authorities, hold an exemption from offering reverse flow capacity at IP Cieszyn/Český Těšín which is valid until 31 December 2022. The project, if implemented, would make IP Cieszyn/Český Těšín bi-directional in line with Article 5(4) of Regulation (EU) 2017/1938 of 25 October 2017 concerning measures to safeguard the security of gas supply.

No comments were received in the public consultation of the Draft Project Proposal held from 13 January 2020 to 13 February 2020, neither by GAZ-SYSTEM nor by NET4GAS.

In this document, the following abbreviations are used:

NC CAM = Commission Regulation (EU) 2017/459;

NC TAR = Commission Regulation (EU) 2017/460.

Following the structure of Article 28 (1) NC CAM, this application is structured as followed:

- Offer Level of the incremental capacity (Art. 28 (1) (a) NC CAM),
- Terms and Conditions for the Incremental Capacity Auction to be accepted by the network user for the acquisition of incremental capacity (Art. 28 (1) (b) NC CAM),
- Timetable for the project of incremental capacity (Art. 28 (1) (c) NC CAM),
- Parameters of the economic test (Art. 28 (1) (d) NC CAM),
- Information on a possible extended time horizon for contracting incremental capacity (Art. 28 (1) (e) NC CAM),
- Information on an alternative allocation mechanism (Art. 28 (1) (f) NC CAM),
- Information on a possible fixed price approach (Art. 28 (1) (g) NC CAM).

2. Offer Level for incremental capacity (Art. 28 (1) (a) NC CAM)

According to Article 28 (1) (a) NC CAM, GAZ-SYSTEM and NET4GAS request to approve the common Offer Level for bundled capacity products to be marketed at IP Cieszyn/Český Těšín in the yearly capacity

auction in 2021 as presented below. The Offer Level takes into account the obligations to set aside capacity based on the calculation methodology described in Article 11(6) of NC CAM.

Year	From 2028/2029 To 2042/2043
Offer Level [kWh/h]/y	1,143,000
Incremental capacity [kWh/h]/y – to be offered	1,143,000
Incremental capacity [kWh/h]/y – total	1,270,000
Existing capacity [kWh/h]/y	0

The Offer Level can be marketed earliest as of gas year 2028/2029 because of the project’s specifics on both sides of the Czech-Polish border.

As there is no existing capacity available at IP Cieszyn/Český Těšín in the direction from Poland to the Czech Republic, both GAZ-SYSTEM and NET4GAS consider only a 10% reservation quota for incremental capacity under the bundled Offer Level. The amount of the set-aside capacity shall be subject to the approval of the Polish and Czech NRAs.

GAZ-SYSTEM and NET4GAS will market the Offer Level in an annual yearly auction on the GSA Platform.

3. Terms and Conditions for the incremental capacity auction to be accepted by the network user for the acquisition of incremental capacity (Art. 28 (1) (b) NC CAM)

For the marketing of incremental capacity (i.e. the Offer Level) in the yearly capacity auction 2021, GAZ-SYSTEM and NET4GAS have developed individual terms and conditions for the incremental capacity auction to be accepted by the network user before the incremental capacity auction.

According to Article 28 (1) (b) NC CAM,

- GAZ-SYSTEM requests the URE to approve its “General Terms and Conditions of participation in and access to capacity in the binding phase of incremental capacity auction on the border between Poland and the Czech Republic” provided along with this application (hereinafter: INC GT&C). To be eligible to participate in the auction, network users will have to accept the INC GT&C as well as other GAZ-SYSTEM rules that are required to participate in the auction on a regular basis, such as the General Terms and Conditions of the Transmission Contract, the Transmission Network Code, and the Tariff.

- NET4GAS requests the ERÚ to approve its Terms and Conditions for the Incremental Capacity Auction which have been sent along with this application. For NET4GAS, the general rules and conditions that a network user must accept to participate and to access capacity in the binding capacity allocation phase of the incremental capacity process are set out in Annex 1 of this document (“Contract for Provision of Gas Transmission Service”) and in the [Network Code](#) of NET4GAS.

Regardless of the fact that both GAZ-SYSTEM and NET4GAS both publish terms and conditions for the incremental capacity auction in English and in their respective national languages, only the Polish and Czech versions respectively, shall be considered as binding.

4. Timetable for the incremental capacity project (Art. 28 (1) (c) NC CAM)

According to Article 28 (1) (c) NC CAM, GAZ-SYSTEM requests to approve the following timetable for its incremental capacity project.

Time period	Milestone
05/07/2021	Yearly capacity auction in July followed by an economic test
3Q/2024	Design contracts signed
3Q/2026	Building permits obtained
1Q/2027	Construction contracts signed
2-3Q/2028	Commissioning of the project
01/10/2028	Expected start of commercial operation of the new infrastructure

Time periods for signing contracts and obtaining building permits are indicated as the **latest finished milestones**, taking into account the three separate investment tasks in the common scope of the incremental project.

According to Article 28 (1) (c) NC CAM, NET4GAS requests to approve the following timetable for its incremental capacity project.

Time period	Milestone
30/06/2021	Auction participants to sign “Contract for Provision of Gas Transmission Service”
05/07/2021	Yearly capacity auction in July followed by an economic test

01/06/2026	Withdrawal right date if permits and/or land rights are not secured (per sections 5.1. of N4G “Contract for Provision of Gas Transmission Service”
01/10/2028	Expected start of commercial operation of the new infrastructure

The construction phase will only start if there is a commitment by the market to acquire the respective incremental capacities in the yearly auction 2021 and if there is also a positive result of the following economic test for each of the TSOs concerned.

Description of the project on the Polish side (GAZ-SYSTEM)

Expansion required within the GAZ-SYSTEM grid:

In order to ensure the possibility of transporting gas in the direction from Poland to the Czech Republic with a maximum capacity of 1,270,000 kWh/h, the following investments are required on the Polish side:

- Construction of a new DN 700 gas pipeline Oświęcim – Tworzeń (L=50 km)
- A separate single unit at the Kędzierzyn compressor station
- Modernisation of the Cieszyn metering station

In addition, on the Polish side, finalisation of the North-South Gas Corridor and in particular construction of the new DN 500 Skoczów – Komorowice – Oświęcim gas pipeline are indispensable investments to provide the reverse flow at IP Cieszyn. However, these investments will not be a part of the concerned incremental project and shall not affect the below provided provisional timeline of the incremental capacity project.

Expected commissioning: 2-3Q/2028

Cost estimation:

Approximately EUR 61.3 million for the pipeline section + EUR 12.9 million for the additional unit at the Kędzierzyn compressor station and EUR 465,000 for the Cieszyn metering station modernisation.

Description of the project on the Czech side (NET4GAS)

New infrastructure required to be implemented on the NET4GAS side:

In order to ensure the possibility of transporting gas in the direction from Poland to the Czech Republic with a maximum capacity of approximately 1,270,000 kWh/h, the following investments are required on the Czech side:

- Construction of a new DN 500 gas pipeline Libhošť - Třanovice (L=60 km)
- A new compressor station (two units + back-up) connected to the new and also to the existing DN500 Libhošť – Třanovice

Implementation of the abovementioned infrastructure components will enable NET4GAS to offer the incremental capacity demanded, assuming the delivery pressure on the border is at least 46 barg. This is the basic precondition for such a technical solution of the incremental capacity project between Poland and the Czech Republic.

Expected start of operation: 4Q/2028¹

Cost estimation: Approximately EUR 93.1 million for the pipeline section + EUR 42.8 million for the compressor station, including a 25% buffer.

Summary of project proposal technical parameters:

	CZ	PL
DN	500	700
PN (CZ) / MOP (PL); bar	63.0	84.0
Border point	<i>Český Těšín / Cieszyn</i>	
Pipeline length	60 km	50 km
Border transfer station	-	Current BTS is already bidirectional and is expected to also be used for this project
Compressor station (MW)	2 x 3.5 MW + 1 x 3.5 MW back up	1 x 8 MW
Metering station	-	Modernisation of metering system by exchanging turbine gas meters into ultrasonic meters
Border delivery pressure		
Direction PL → CZ	46.0 barg	
Maximum daily capacity to CZ		
mcm/d @0°C	2.73	2.73

¹ Value amended since the publication of the Draft Project Proposal in January 2020 to take into account the expected impact of various implementation risks following a review of the project's planning assumptions.

GWh/d	30.48	30.48
Max. hourly capacity to CZ		
mcm/h @0°C	0.11	0.11
GWh/h	1.27	1.27
CAPEX (mEUR)	135.9	74.7
CAPEX accuracy (± %)	25% buffer already included in estimate quoted above	25% buffer already included in estimate quoted above
Cleanability	Bidirectional	
Start of commercial operation	4Q/2028 ²	4Q/2028

5. Parameters of the economic test (Art. 28 (1) (d) in conjunction with Art. 22 (1) NC CAM)

According to Article 28 (1) (d) NC CAM, GAZ-SYSTEM and NET4GAS request to approve the parameters of the economic test.

The economic test is based on the following parameters according to Article 22 (1) NC CAM:

- a) The present value of the binding commitments of the network users for contracting capacity
- b) The present value of the estimated increase in the allowed or target revenue of the TSO associated with the incremental capacity included in the respective Offer Level
- c) The f-factor

Reference price for determining the present value of the binding commitments of network users – GAZ-SYSTEM

According to Art. 22 (1) (a) in conjunction with Art. 25 (1) (a) of the NC CAM, the President of the URE approves the reference prices estimated for the time horizon of the incremental capacity offered by GAZ-SYSTEM as part of the incremental project for the market border of Poland and the Czech Republic. The reference prices, amounting to PLN 1.854 /(MWh/h)/h (EUR 0.43 /(MWh/h)/h), will be used in the economic test carried out by GAZ-SYSTEM to calculate the current value of the liabilities of network users

² Value amended since the publication of the Draft Project Proposal in January 2020 to take into account the expected impact of various implementation risks following a review of the project's planning assumptions.



in the scope of contracting incremental capacity made available under offers placed in the auction procedure at IP Cieszyn.

The reference prices should be set for the time horizon of the incremental capacity offered under the project for the market border of Poland and the Czech Republic, i.e. for the time horizon of 15 gas years, i.e. from 1 October 2028 until 1 October 2043.

It should be emphasized that GAZ-SYSTEM is currently undergoing the implementation of capital-intensive investment projects aimed at ensuring the diversification of gas supplies to Poland. The dynamics of the implementation of these projects is difficult to predict. This is due to the fact that the projects will be implemented with the cooperation of other European gas transmission system operators and that their implementation is only partly dependent on the schedule of operation undertaken by GAZ-SYSTEM.

Reference rates estimation for a 15-year time horizon, with such a high dynamic implementation of strategic investment projects may bring unrealistic and unreliable results in the form of an increase in transmission charges, which will reduce the level of capacity required to achieve a positive result from the economic test.

Given the above arguments, GAZ-SYSTEM proposes to adopt, for the purposes of the economic test for all the years covered by the analysis, a reference price at the level of the fixed fee for the provision of gas transmission services at the exit point binding from 1 January 2021 to 31 December 2021. This method is in accordance with "The Tariff for Gas Transmission Services No. 14" approved by the decision of the President of the URE No. DRG-2.4212.7.2020.JDo1 on 5 June 2020.

Present value of the estimated increase in the allowed revenues due to capacity increase – GAZ-SYSTEM

The target value of the estimated increase in allowed revenues corresponds to the value of the investment funds cost concerning the project implemented by the transmission system operator and settled in the period covering the contracted incremental capacity made available as part of offers submitted in the auction procedure for IP Cieszyn.

GAZ-SYSTEM adopted a discount rate of 6% for the calculation of the discounted value of the allowed revenue related to the realization of the project for the market border of Poland and the Czech Republic in the years 2028-2043.

This value is equal to the risk-free rate adopted for the purposes of the calculation of the reference rates binding in 2021, and it has been approved by the President of the URE.

This value was determined using the calculation tool provided by GAZ-SYSTEM. The calculation tool reflects the current practice, including the calculation parameters for determining the allowed revenues approved by the President of the URE for the tariff for 2021.

F-factor for GAZ-SYSTEM

The f-factor must take the following into account:

- a) The amount of technical capacity set aside according to Articles 8 (8) and (9) NC CAM;
- b) The positive externalities of the incremental capacity project on the market, the transmission network, or both;
- c) The duration of the binding commitments of the network users for contracting capacity compared to the economic life of the asset;
- d) The extent to which the demand for the capacity established in the incremental capacity project can be expected to continue after the end of the time horizon used in the economic test.

The project assumptions are based on the non-binding demand indications received in the demand assessment phase. This f-factor was estimated based on the assumption that the given incremental capacity project is purely a market-driven project and that the full cost of the project shall be covered by the capacity bookings in the relevant binding capacity auction. Thus, on the GAZ-SYSTEM side, there are no conditions allowing GAZ-SYSTEM to request an approval involving an f-factor which is less than 1.

In addition, considering the level of incremental capacity to be offered and the required level of revenues from the binding commitments of the network users to pass the economic test with an f-factor equaling 1, it is also necessary to apply a mandatory minimum premium of PLN 1.328 /(MWh/h)/h (EUR 0.3 /(MWh/h)/h).

Therefore, GAZ-SYSTEM requests approval of an f-factor which amounts to 1 for the application of the economic test.

Based on the above considerations, the economic test calculation tool provided by GAZ-SYSTEM has been filled in accordingly and is attached along with this application.

Reference price for determining the present value of the binding commitments of network users – NET4GAS

NET4GAS expects the reference price to equal the current entry tariff of CZK 219.46 /MWh/d/y at the Cieszyn interconnection point. Noting that even the allocation of all incremental capacity available for booking in the 2021 auction at this reference price would clearly not generate sufficient revenues for a positive economic test outcome, NET4GAS also proposes a mandatory minimum premium of 14,303.81 CZK/MWh/d/y.

The total price – consisting of the sum of the reference price plus the mandatory minimum premium - is quoted in nominal terms and is subject to adjustment for inflation as set forth in the pricing methodology given in the *Principles of Price Regulation for the Period 2021-2025* by the Czech NRA (ERÚ) and further applied via their Price Decision for specific auctions. For the purpose of this economic test calculation, NET4GAS assumes that these inflation adjustments will amount to 2% per annum.

In addition to the abovementioned tariffs, flow-based charges – described in the Czech NRA's Principles of Price Regulation and set in the ERÚ's price decisions, will be payable by the shippers. From the point of view of NET4GAS, these charges are cost-neutral (i.e. not generating any profit or loss over time) and shall therefore not be considered in the economic test.

NET4GAS proposes that a discount rate of 8.32% - equivalent to the pre-tax nominal Weighted Average Cost of Capital applicable to transit projects in the Czech Republic under the rules of the 5th Regulatory Period, is used to determine the present value of the binding commitments of the network users in the economic test following the auction in 2021.

Present value of the estimated increase in the allowed revenues due to capacity increase – NET4GAS

Using a discount rate of 8.32% (as described above), NET4GAS calculates that the present value of the estimated increase in its target revenue associated with this project is CZK 2,458.9 M.

F-factor for NET4GAS

The f-factor must take the following into account:

- a) The amount of technical capacity set aside according to Articles 8 (8) and (9) NC CAM;
- b) The positive externalities of the incremental capacity project on the market, the transmission network, or both;
- c) The duration of the binding commitments of the network users for contracting capacity compared to the economic life of the asset;
- d) The extent to which the demand for the capacity established in the incremental capacity project can be expected to continue after the end of the time horizon used in the economic test.

Like GAZ-SYSTEM, NET4GAS views this incremental project as purely a market-driven one and therefore believes that the project's full cost must be covered by the capacity bookings made in the relevant binding capacity auction. **NET4GAS thus requests to approve an f-factor which amounts to 1 for the application of the economic test.**



6. Possible extended time horizon for contracting incremental capacity (Art. 28 (1) (e) NC CAM)

Based on a common decision, GAZ-SYSTEM and NET4GAS agree that, for this incremental capacity project, no extended time horizon for contracting incremental capacity is needed.

7. Alternative allocation mechanism (Art. 28 (1) (f) NC CAM)

GAZ-SYSTEM and NET4GAS abstain from an application of an alternative allocation mechanism for the acquisition of incremental capacity according to Article 28 (1) (f) NC CAM. Based on a common decision, both TSOs will apply the standard auction procedure for incremental capacity in 2021.

8. Application of a fixed price approach (Art. 28 (1) (g) NC CAM)

GAZ-SYSTEM abstains from applying for a fixed price approach for the acquisition of incremental capacity in 2021 according to Article 28 (1) (g) NC CAM.

NET4GAS notes that project will follow a fixed-price approach in line with the obligation stemming from the abovementioned Principles of Price Regulation for the Period 2021-2025, Chapter 10.6. NET4GAS proposes that the value of the RP parameter as defined in Article 24 (b) NC TAR is set at 0 and that the determination of the IND parameter defined in that same article will follow the same rules as set out in the current Price Decision of the Energy Regulatory Office (#4/2020).

9. Contact information



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